REMARKS

This Response is prepared in response to the second Office action (Paper No. 032906) mailed on 19 April 2006. Claims 1-35 are pending.

In Paper No. 032906, the Examiner rejected claims 21-29 and 31-35 under 35 U.S.C. 103 (a) as being unpatentable over USP 4,710,922 to Scott in view of USP 5,832,119 to Rhoads. Applicant traverses this rejection for the following reasons.

In Paper No. 032906, the Examiner relies on Scott for an alleged teaching of every feature of Applicant's claims 21-29 and 31-35 except for a teaching of a video player. For this, the Examiner turns to Rhoads. The Examiner states, on page 3 of Paper No. 032906, that "Rhoads discloses a system wherein an integrated chip is part of a video player system as seen in Figure 6 and described in column 2 lines 20-45." Applicant disagrees.

To begin with, Applicant submits that the lookup table in Applicant's invention has mapped control data corresponding to the control states of the video/audio signal processing IC. However, in newly cited Rhoads, the lookup table has coded data of rough offsets and RMS noise of video and audio signals. Thus, Rhoads has nothing to do with the control of the video/audio signal processing IC. Therefore, Scott as modified according to Rhoads can not possibly teach Applicant's claimed invention.

Applicant further submits that in Rhoads, the ID word is embedded into the transmitted

signal by using N-bit code signal and there is no description in Rhoads regarding the type of transmission data. In other words, Rhoads has nothing to do with the serial transmission of the data. Because of this, Applicant submits that it is not obvious to apply the serial transmission of commands in a non-video player environment of Scott to the video environment of Rhoads.

Applicant further submits that Applicant has reviewed Rhoads and submits that as a whole, Rhoads is not about an integrated chip of a video player but is instead about software that prevent illegal pirating (copying or viewing) of copyrighted pictures, audio or video works while providing for proper authentication of copyright works. Rhoads does this by preventing kiosks from copying illicit photos and preventing the illegal copying of video. This is achieved by an algorithm that registers stenographically a registration mark of an author in a piece of work and does this in a manner that is not easily circumvented by a pirate. Rhodes is about software that can prevent such pirating and provide for such authentication for audio, pictures and video works. Applicant submits that Rhodes has absolutely nothing to do with an integrated chip within a video player.

To support the Examiner's contention that Rhoads pertains to an integrated chip within a video player, the Examiner, on page 3 of Paper No. 032906, makes reference to FIG. 6 and column 2, lines 20-45 of Rhoads. Applicant has reviewed FIG. 6 of Rhoads and Applicant submits that FIG. 6 has nothing to do with an integrated chip within a video player. Instead, FIG. 6 of Rhoads makes reference to a "black box" 202 illustrating software algorithm. Black box 202 merely receives an input signal and a code word and produces an identification-codes output signal (see col 16, lines 50-57 of Rhoads). Applicant submits that there is no teaching or suggestion that black box 202 of

Rhoads in an integrated chip as alleged by the Examiner. Even more, Applicant submits that black box 202 of Rhoads has nothing to do with an A/V IC chip that receives control signals as claimed by Applicant. Yet further, black box 202 of Rhoads can be part of a audio or a picture device instead of being part of a video device and thus is not germane to video players.

Regarding col 2, lines 20-45 of Rhoads, col 2, lines 20-45 of Rhoads describes preventing unwarranted usage of copyrighted works via a usage control signal. Applicant submits that this has absolutely nothing to do with Applicant's invention and has nothing to do with an integrated chip within a video player. Instead, it is a way of discerning whether or not a video is copyrighted and thus should not be copied and whether or not a video is authentic. Because Rhoads has nothing to do with Applicant's invention and nothing to do with an integrated chip in a video player, Applicant submits that the use of Rhoads to reject Applicant's claims is improper.

In justifying the combination of Rhoads and Scott, the Examiner in Paper No. 032906 states, "it would have been obvious to one having ordinary skill ion the art at the time of the invention to use the micro processing apparatus, as disclosed by Scott, and further incorporate a system that contains a video player, as disclosed by Rhoads." Applicant disagrees.

To begin with, there is no motivation present in Scott as to why one having ordinary skill in the art would want to improve upon Scott by turning to a reference that pertains to authentication of copyright works and prevention of pirating of copyright works. Applicant submits that there is no motivation present in either Scott or in Paper No. 032906 as to why one of ordinary skill in the art

in possession of Scott would want to turn to Rhoads to fill in for any deficiencies of Scott. Scott never mentions the need for authentication of copyrighted works or the need for the prevention of piracy of copyrighted works. Motivation to combine must be derived from the prior art themselves (see MPEP 2143) and Applicant can not find any evidence in Scott as to why one would want to turn to Rhoads to fill in for the deficiencies of Scott.

Furthermore, the fact that in the previous Office action (Paper No. 081205), the Examiner did not use or apply Rhoads and the fact that Applicant pointed out to the Examiner in the Response filed on January 25, 2006 that Scott does not pertain to a video player or an A/V IC chip is evidence that the Examiner is merely using improper hindsight reconstruction to use Rhoads and to pick and choose different features out of Rhoads and Scott to arrive at Applicant's claimed invention. Applicant submits that this is evidence of where the motivation to apply Rhoads and to combine Rhoads with Scott to reject Applicant's claims is derived from Applicant's claims and Applicant's remarks of January 25, 2006 and not from Scott. Because the motivation to combine Rhoads with Scott is faulty, the rejection of Applicant's claims 21-29 and 31-35 can not stand.

In addition to no proper motivation to combine, Applicant submits that numerous features and limitations of Applicant's claims 21-29 and 31-35 are not present in either Scott and Rhoads. For example, in claims 21, 31 and 33, Applicant claims an integrated circuit (A/V IC) chip. Applicant submits that neither Scott nor Rhoads teach or suggest such an A/V IC chip in a video player.

In Applicant's claim 21, Applicant claims, "an audio/video integrated circuit (A/V IC) chip receiving control signals in seriatim via a single electrical pin, said control signals control said A/V IC chip". Applicant has reviewed the entire references to Scott and Rhoads can not find any comparable feature in either Scott or Rhoads.

Albeit true that Scott discloses a receiver 104 that receives signals in serial. However, as is clearly evidenced by FIG. 12 of Scott, the SERIN 1206 is two (2) lines, not a single electrical pin as claimed by Applicant. This is critical as the notion of Applicant's invention is to reduce the number of pins, and Scott falls short by requiring two pins to receive the serial data when Applicant clearly claims just one pin to receive the serial data. Because of this, the combination of Scott and Rhoads again fails to anticipate Applicant's claims.

Applicant also claims in claims 21, 31 and 33 that the serially received signals control the chip. The same cannot be said for the receiver chip 104 in Scott. In Scott, the received signals are then disbursed to command logic and to data sink and are used by other chips. Because the signals received by receiver chip 104 in Scott are not used to control that chip, Applicant yet again submits that the combination of Scott and Rhoads fail to anticipate Applicant's claims 21, 31 and 34.

Regarding claims 31 and 33, Applicant claims in claim 31 "synchronizing said serial control signal with said clock signal" and claims in claims 31 and 33 "receiving said encrypted serial control signal via a first input pin on said A/V IC chip and receiving said clock signal via a second input pin on said A/V IC chip". Applicant submits that the same can not be said to be true with Scott or

Rhoads. Applicant submits that the serial data sent from transmitter 103 to receiver 104 in Scott is not accompanied by and is not synchronized with a clock signal. Further, receiver 104 in Scott does not receive a clock signal from the transmitter 103. Further, Rhoads fails to teach or suggest a comparable feature. For these reasons, Applicant yet again traverses the anticipation rejection of claims 31 and 33 using Scott and Rhoads combined.

In Paper No. 032906, the Examiner rejected claims 1, 14, 15, 16, 18, 19 and 20 under 35 U.S.C. 103 (a) as being unpatentable over USP 5,479,445 to Kloker et al in view of Scott. Applicant traverses this rejection for the following reasons.

In independent claims 1, 15, 16 and 19 and again in their depending claims, Applicant claims a video player. Applicant has reviewed Kloker and can find no evidence of a video player in Kloker. Because Applicant claims a video player and because neither Kloker nor Scott pertain to a video player, the rejection to claims 1, 15, 16 and 19 is without merit.

In independent claims 1, 15, 16 and 19 and again in their depending claims, Applicant claims an A/V IC chip. Applicant has reviewed Kloker and can find no evidence of an A/V IC chip in Kloker. Because Applicant claims an A/V IC chip in claims 1, 15, 16 and 19 and because neither Kloker nor Scott do not pertain to an A/V IC chip, Applicant submits that the rejection to claims 1, 15, 16 and 19 in Paper No. 032906 is without merit.

With respect to the rejection of claims 1, 14, 15, 16, 18, 19 and 20, Applicant further submits

that the references of Kloker and Scott, as a whole and in general, do not disclose the look-up tables of Applicant's claimed invention. Kloker et al. relates to an apparatus that transmits audio data and non-audio data among a plurality of sources and sinks, but does not disclose the transmission of control data of Applicant's invention. Meanwhile, Scott relates to the transmission of data and commands which are multiplexed. Referring to FIG. 1 of Scott, a receiver (104) transmits commands to a receiver command logic (105) after separating the commands from the received serial data. Thus, the command logic (105) of Scott does not directly receive serial data, but a parallel control command.

According to Scott, an apparatus may transmit/receive through serial communication both commands and data which are multiplexed among a plurality of devices. However, such an apparatus cannot also realize the embodiments of Applicant's invention such as a video player, an AV IC and a transmitting/receiving method. In particular, the apparatus of Scott cannot include a first look-up table of the video player and a second look-up table of the AV IC.

Further, it is unreasonable to insist that an encoder (603) and a decoder (602) of Scott are similar to the first look-up table and the second look-up table, respectively, This is because the encoder (603) of Scott merely performs an operation of grouping variable data (8-10 bits) and variable commands (2-4 bits) into fixed numbers of bits to be transmitted, and thus does not perform a mapping operation as in Applicant's claimed invention. Applicant's claimed invention performs a mapping operation between, serial data, and control states and thus Applicant's claims 1, 14, 15, 16, 18, 19 and 20 cannot possibly be held to be taught or suggested by the combination of Kloker

and Scott.

Regarding Applicant's claim 14, Applicant claims that the serial data is synchronized to a synchronization signal when a chip select signal is enabled. On Page 10 of Paper No. 032906, the Examiner states that this is taught in col 10 lines 29-43 of Kloker. Applicant disagrees. Applicant submits that col 10, lines 29-43 of Kloker teach mode control. Applicant submits that mode control in Kloker has nothing to do with synchronization or chip select. Mode control pertains to selection of a serial mode that pertain to the shifting, the number of bits and format that the data is sent. Applicant has reviewed the entire reference to Kloker and can not find any evidence of chip selection and synchronization that accompanies serial transmission of control signals. Because of this, the rejection to claim 14 must be withdrawn.

Regarding Applicant's claim 20, Applicant claims, "wherein the serial data is formed of a first group having necessary control states corresponding to the operation modes of the video player and the [an] other group having control states corresponding to selective operation modes attached to the operation modes, and the decoder preferentially decodes control signals corresponding the first group". On Page 14 of Paper No. 032906, the Examiner states that this limitation is taught by column 42, lines 1-30 of Kloker. Applicant disagrees. Applicant submits that column 42, lines 1-30 of Kloker is claim 26 of Kloker. Applicant has reviewed this section of Kloker and can not find any comparable feature in this section of Kloker that corresponds to this grouping feature of Applicant's claim 20.

Claim 26 of Kloker discuss two audio channels and two non-audio channels, but there is no teaching that data in one channel is for necessary control states and data in the other channel is for selective operation modes as taught and claimed by Applicant. The channels are for left and right audio channels, not for grouping of control states that correspond to operation modes of video players. Because claim 26 of Kloker does not teach the limitations of Applicant's claim 20, the rejection of Applicant's claim 20 is without merit.

In the rejection of claims 1, 14, 15, 16, 18, 19 and 20 in Paper No. 032906, the Examiner relies on Kloker for a teaching of every feature except the look up table features. The Examiner turns to Scott to fill in for this deficiency. Applicant objects. Applicant submits that one having ordinary skill in the art would not be inclined to turn to Scott to fill in for the deficiencies of Kloker.

Kloker pertains to a transceiver that can transmit serial data from one audio source to an audio sink. Kloker seeks to allow for formatting of the serial data so that the transceiver can interface with all types of audio sinks without requiring extra circuitry. Kloker achieves this by allowing a user to program a mode control signal to inform the transceiver what serial mode the data must be formatted in. When the transceiver receives this mode control signal, it automatically reformats the serial data by providing the correct number of bits and the correct shifting so that the data is in the correct format for the receiving device. Kloker has nothing to do with parallel transmission of data, has nothing to do with conversion of data between parallel and serial. Furthermore, the received data received by the audio sink in Kloker is not reconverted back into the format it was originally sent in by the audio source.

Scott, in contrast, pertains to an apparatus and a method of transmitting data. At first, the data is in parallel. Then it is put into serial form, transmitted, and reconverted back into parallel form. The serial data channel between the transmitter and the receiver in Scott comprises two separate lines or two separate pins to allow for cascading.

In Paper No. 032906, the Examiner states that the reason why one having ordinary skill in the art would want to turn to Scott to fill in for the deficiencies of Kloker is "to reduce the amount of component in the circuitry to achieve a cost efficient system." Applicant disagrees.

To begin with, there is no teaching in Kloker as to why Kloker needs or would benefit by parallel to serial conversion, serial to parallel conversion, etc. In Kloker, the data is sent in serial form and is received in serial form with no conversion to parallel. There is no hint in Kloker as to why Kloker can be improved if serial to parallel or vice versa conversion was to be employed. Because of this, Applicant submits that one having ordinary skill in the art would not be inclined to turn to Scott to fill in for the deficiencies of Kloker.

Furthermore, Kloker teaches that serial data is reformatted once by the transceiver when sent from the source to the sink. There is no teaching in Kloker that the same data is reconverted back into its original format. In contrast, Scott teaches encoding and then decoding, to put the data back in its original parallel format. Because of this, Applicant submits that Scott and Kloker are unrelated to each other, and thus cannot be combined.

Kloker merely pertains to reformatting serial audio data into a format that can be used by another audio device. This reformatting pertains to the number of bits in an audio sample, bit protocol, bit shifting, etc. Scott pertains to parallel to serial conversion and serial to parallel conversion. These two tasks are unrelated to each other and thus should not be combined.

In Paper No. 032906, the Examiner rejected claims 2, 3, 4, 5, 6, 7, 9, 11, 12, 13 and 17 under 35 U.S.C. 103 (a) as being unpatentable over Kloker in view of Scott and further in view of USP 5,966,496 to Takimoto.

With respect to the rejection of claims 2-7, 9, 11, 12-13 and 17, Applicant has the following comments. Takimoto relates a DAT (Digital Audio Tape) that records serial data, but does not disclose the transmission of both data and commands in the form of serial data.

A DAT may multiplex audio data and non-audio data and transmit/receive the same among its internal components. However, such a device does not suggest the video player, the AV IC or the transmitting/receiving method of the present invention. In particular the device does not suggest the first look-up table (if the video player and the second look-up table of the AV IC of the present invention. Therefore, the combination of Kloker, Scott and Takimoto cannot possibly teach Applicant's claims 2-7, 9, 11-13 and 17.

In claims 2 and 17, Applicant claims, "grouping possible control states into a first group having necessary control states corresponding to the operation modes of the video player, and other

groups having control states corresponding to selective operation modes attached to the operation modes". In Paper No. 032906, the Examiner turns to Takimoto, and in particular, to columns 15-17 of Takimoto for a teaching of this limitation. Applicant disagrees.

To begin with, Takimoto pertains to handling and recording of "sub-information" along with video and audio signals on a tape. This sub-information contains the television signal format and a recording mode such as tape speed. In contrast, Applicant's invention is about handling of control signals to control a VCR, not about recording additional information on a tape. Applicant submits that Takimoto is not about handling of control signals. Takimoto is about recording sub-information on a tape. Therefore, the purpose and construction of Takimoto is unlike that of Applicant's claimed invention.

In claims 2 and 17, Applicant claims, "mapping serial data corresponding to each of the control states." In Paper No. 032906, the Examiner never addresses this limitation in the rejection of claim 2. Furthermore, Applicant can not find any comparable feature in Takimoto that reads on this mapping limitation.

Regarding Applicant's claim 6, Applicant claims an entire lookup table for the first group of control states. In Paper No. 032906, the Examiner, in the rejection of claim 6, merely states "claim 6 meets the limitations of claim 3, 4, and 5". Applicant objects. Applicant submits that this is evidence of an incomplete examination of Applicant's patent application. Furthermore, Applicant cannot find any evidence of the table of Applicant's claim 6 in the applied prior art, including the

reference to Takimoto. Therefore, this claim rejection of Applicant's claim 6 is without merit.

Regarding Applicant's claim 9, Applicant claims, "wherein in the mapping process, control states related to the mixing ratio of luminance/chromaticity signal, recording current control amount, recording equalize control amount, etc., are grouped into a third group and mapped". On Page 19 of Paper No. 032906, the Examiner states that this feature is taught at column 14, line 37 through column 15, line 21 of Takimoto. Applicant disagrees. Applicant has reviewed this section of Takimoto along with the entire reference to Takimoto and can not find any evidence of a luminance/chromaticity signal or recording current or equalize control amount. Applicant submits that this section of Takimoto instead pertains to dubbing and digital audio output, not luminance/chromaticity signal or recording current or equalize control amount. Therefore, the rejection of claim 9 is without merit.

Applicant further submits that one having ordinary skill in the art would not be motivated to turn to Takimoto to fill in for the deficiencies of Scott and Kloker. Scott has to do with parallel to serial and then back to parallel conversions. Kloker pertains to a transceiver that can be used to transmit audio data to a wide variety of audio devices by changing the data format. Takimoto pertains to recording sub-information along with video and audio signals on a tape in a video reproducing apparatus. Applicant submits that the purpose and construction of Takimoto and that of Scott and/or Kloker are entirely unrelated

Applicant submits that Scott and Kloker are about signal handling whereas Takimoto is about

-14-

recording additional information on a tape. Applicant submits that there is no reasonable nexus between Takimoto and the references of Scott and Kloker. Further, the purpose and construction of Takimoto is entirely unrelated to that of Scott and Kloker. For these reasons, Applicant submits that Takimoto is not combinable with either Scott and/or Kloker.

In Paper No. 032906, the Examiner justifies combining Takimoto with Scott and Kloker by saying, on the bottom of Page 16 and the top of Page 17, that the incorporation of the mapping process of Takimoto reduces the amount of component in the circuitry to achieve a cost efficient system. Applicant first submits that Takimoto does not teach the mapping. Secondly, the Examiner never addresses how Takimoto further improves the parallel to serial to parallel scheme of Scott and the reformatting of data of Kloker. The Examiner is merely haphazardly combining references to reject Applicant's claims without proper justification and without proper motivation. Therefore, the rejection of claims 2, 3, 4, 5, 6, 7, 9, 11, 12, 13 and 17 must be withdrawn.

In Paper No. 032906, the Examiner rejected claim 30 under 35 U.S.C. 103 (a) using Scott in view of Rhoads and further in view of USP 6,016,169 to Mok.

In claim 30, Applicant claims, "wherein said A/V IC chip comprises three electrical input pins, one for the control signals, one for the clock signal, and the last for the chip select signal". In Paper No. 032906, the Examiner states that this feature is taught by FIG. 2 of Mok, which shows a reference numeral 100 that has three inputs, a CK, a D and a SET. Applicant disagrees.

Applicant submits that reference numeral 100 of Mok is a fusing portion of a frequency modulation circuit. Fusing portion 100 contains a fusing circuit 30 that melts fuse elements. Applicant submits that fusing portion 100 of Mok is not and can not be an A/V IC.

Fusing portion 100 of Mok is used to make IC's for video cassette recorders. Fusing portion 100 of Mok is not a video cassette recorder and is not part of a video cassette recorder. Furthermore, fusing portion 100 of Mok is not used during the operation of a video cassette recorder. For these reasons, the rejection of claim 30 in Paper No. 032906 using Mok is entirely without merit.

No other issues remaining, reconsideration and favorable action upon all of the claims now present in the application is respectfully requested.

No fees are incurred by the filing of this response.

Respectfully submitted,

Robert E. Bushnell,
Attorney for the Applicant
Registration No.: 27,774

1522 "K" Street N.W.,
Suite 300
Washington, D.C. 20005
(202) 408-9040

Folio: P56351
Date: 7/18/06
I.D.: REB/ML